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ABSTRACT

A state-wide microcomputer software program and support system for local education agency (LEA) reporting of Chapter 1 fiscal and evaluation information was developed. The microcomputer budget application for West Virginia was developed by the Technical Assistance Center at RMC Corporation. The program is intended for use by the Chapter 1 staff of each LEA in West Virginia. It was designed to facilitate the various fiscal reporting requirements of Chapter 1. The manual was developed to provide instructional support in recording monthly expenditures, but additional fiscal capabilities are also available. These include development of new budgets for the subsequent year's operations, projection of end-of-year line item and total balances, and recording budget modifications as a result of those projections. Chapter 1 personnel may use the budget program to keep track of the expenditures for each month, modifications to the budget, and the effects of expenditures and modifications upon the operating budget. Several printing options are available, depending upon the intended audience. The manual (a separate document) contains an introduction to VisiCalc, methods of applying VisiCalc to West Virginia Chapter 1 budgets, and procedures for file storage and maintenance. Appendices A through E introduce the Apple Computer keyboard and elementary topics. (Author/DWH)

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STATE-WIDE MICROCOMPUTER SOFTWARE FOR FISCAL AND EVALUATION REPORTING

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TM 840 233 (10 of 12)

American Educational Research Association
New Orleans
April, 1984

State-Wide Microcomputer Software
for Fiscal and Evaluation Reporting

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OVERVIEW

Objective. To develop state-wide microcomputer software and support systems for LEA reporting of Chapter 1 fiscal and evaluation information.

Perspectives. The State of West Virginia requested RMC to develop a microcomputer program to facilitate the recording and reporting of each LEA's fiscal expenditures and evaluation results. RMC is the Chapter 1 Technical Assistance Center serving West Virginia. The focus of this presentation will be on the completed fiscal program. The development of the evaluation program has been placed on hold, but will likely follow the approach used by the Minnesota and Pennsylvania Chapter 1 offices. The West Virginia Microcomputer Budget File was developed for four main reasons. The Chapter 1 staff of the West Virginia Department of Education wanted to:

1. automate fiscal planning and reporting
2. facilitate wise micro hardware/software purchasing decisions
3. limit the number of micro approaches to fiscal reporting
4. support services to LEAs which opted into a micro approach

Steps in development. The following steps were taken in the development of the fiscal program.

1. Regional meetings were held in West Virginia to acquaint Chapter 1 personnel with general microcomputer applications in education as well as specific software available for fiscal and evaluation purposes.
2. The SEA surveyed all counties concerning available microcomputers as well as desires and constraints regarding fiscal and evaluation reporting.
3. TAC and SEA staff reviewed existing software.
4. TAC developed 1) specific templates for the chosen software package, 2) supporting written materials and 3) an inservice workshop.
5. TAC provided small group in-service resulting in customized budget record-keeping.

In discussions between WVSDE Chapter 1 personnel and TAC personnel, various options in software and hardware were analyzed. After a survey of LEAs indicated that almost all had administrative access to Apples, it was decided to develop a VisiCalc template for Apples. The workshop training package was piloted with three LEAs and, upon revision to the stage found in the accompanying handout, it was presented to approximately half of the 55 LEAs in West Virginia.

Overview of program. The microcomputer budget template contains all the possible line items that any West Virginia Chapter 1 program might include in their budget. After customizing the general program for each LEA, the template for local use contains only those line items they actually need. Methods for calculating fixed charges were also customized. The software facilitates five major fiscal functions:

1. Budget development
2. Reporting of monthly expenditures
3. Reporting of project modifications (moving $ from one line item to another)
4. Reporting of project amendments (increasing or decreasing total budget)
5. Projecting year-end expenditures assuming spending at current rate.

Workshop training package. The workshop was designed to train even the most computer naive person. An optional first two hours introduced the concepts of hardware, software, micro logic, disk care, and the basic keyboard. Although the session was announced to be introductory, all participants attended with even the most advanced participants indicating that they received some benefit.

The workshop then covered such VisiCalc notions as booting VisiCalc, the basic template, loading a file, entering labels and values, and saving a file.

Instead of presenting the entire West Virginia budget template (some 86 rows and 30 columns, the participants used various training forms developed by RMC. Participants started with a budget template that could be seen in its entirety on the screen.

This elementary budget illustrated how quickly and reliably the VisiCalc program operates. When participants made changes in the file, adjustments to the "Balance" column and "Totals" row were easily observed. Eventually, participants noted that the

rows were not detailed enough (since the rows were only subtotals, not individual line items of fiscal categories). In addition, participants usually noted that it would be nice to have columns for each month since they had to make monthly reports.

The next training file contained detailed line items for only two categories of expenditures, as well as the line items for fixed charges. The purpose of this training file was to illustrate the budget development process. Subsequent files were loaded on top of each other in an attempt to reduce data entry by participants.

The third training file illustrated the process of making budget amendments (adding or subtracting the total amount of dollars available) and budget transfers and amendments (adding or substracting dollars from line items).

The fourth training file contained all the columns (but only a small subset of rows) that the final customized file would contain. Columns are available for monthly entry of expenditures and unliquidated encumberances. Year-to-date expenditures for each line item are continuously recalculated, as well as projected balance and current balance - thus allowing continuous monitoring of line item expenditures.

Once participants understood the power of the budget template, they were provided with their customized version,- that is, a template containing only the line items and fixed charges protocol they use for their own Chapter 1 project. Participants then entered their original FY budget and whichever month's

expenditures had already occurred. Hard copy was then printed - usually a satisfying experience for novices who didn't yet trust disk storage. In several cases, additional customized templates were generated for the Migrant program.

Recommendations

1. The reference manual should be revised such that files are not loaded over another file. Since this is generally not a good practice, and since the practice is not utilized in implementing the fiscal procedures, we would revise the training to eliminate this procedure.
2. In order for someone in another state to adapt the program, line items would have to be changed to the nomenclature and classification of that state. Also, the specifics of how indirect rates are calculated will change from state to state.
3. Current budgets for each LEA should be obtained prior to training so that the template can be customized for each LEA prior to the workshop. We tried to customize budgets on-site at our first workshop and numerous problems arose - mostly because of time pressures.
4. Participants should be requested to bring their own micros. Although micros aren't as portable as the manufacturers would have us believe, there is much to be gained by participants discovering that they can make their micro do want they want it to do. Presenters must be knowledgeable of all combinations of micros (including Apple III, IIe, and II+) and peripherals.
5. Be prepared to assist participants in setting up

their micros. One participant brought freshly purchased micro, still in the box.

6. An assistant is needed for approximately every five micros. Ideosyncratic problems and questions are constantly arising which can best be handled individually. Its difficult to keep everyone on schedule without an assistant attending to individual problems.

WEST VIRGINIA

MICROCOMPUTER
BUDGET FILE

1983

Apple II+ Version

Developed by

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TM 840 233 (272)

TABLE OF CONTENTS

HOW TO USE THIS MANUAL.....1
INTRODUCTION.....2

I. Introduction to VisiCalc.....3

A. BOOTING VISICALC.....3
B. STEP 1: Loading a File 4
C. STEP 2: Looking Over a File.....6
D. STEP 3: Entering Information.....7

II. Applying VisiCalc to West Virginia Chapter 1 Budgets.....10

A. DEVELOPING A BUDGET.....10

STEP 1: Get file on the screen.....11
STEP 2: Look over the file 11
STEP 3: Enter account code amounts.....11
STEP 4: Check the subtotals and total.....12
STEP 5: Continue making entries.....12
STEP 6: Adjust account code amounts.....12

HINTS AND SHORTCUTS FOR BUDGET DEVELOPMENT.....13

B. BUDGET TRANSFERS AND AMENDMENTS.....15

STEP 1: Look over the file.....15
STEP 2: Entering the Budget Transfer.....16
STEP 3: Correct entry errors.....17
STEP 4: Save the new information.....17
STEP 5: Back-up the new information.....17

C. RECORDING MONTHLY EXPENDITURES.....17

STEP 1: Look over the file.....18
STEP 2: Enter the month's expenditures.....18
STEP 3: Correct entry errors.....19
STEP 4: Save the new information.....19
STEP 5: Back-up the new information.....19

D. PUTTING IT ALL TOGETHER.....20

III. File Storage and Maintenance.....23

A. SAVING A NEW FILE.....23
B. INITIALIZING A DISK.....24
C. BACKING UP A FILE.....24
D. PRINTING A FILE.....25

Appendix A - Microcomputer Hardware.....29
Appendix B - Diskette Information and Rules.....30
Appendix C - Memory.....31
Appendix D - Booting Instructions.....32
Appendix E - Apple Keyboard.....33
Appendix F - File Information Sheet.....34

How to Use This Manual

This manual is for Chapter 1 personnel who desire to learn how to use microcomputers to keep track of their budgets. Along with this manual you should have a VisiCalc Program Diskette and the Data Diskette developed by RMC Research Corporation's Chapter 1 Technical Assistance Center.

This manual has two purposes. First it is designed to be an instructional manual to be used during the orientation workshop presented by the Technical Assistance Center (TAC). It can also be used as a reference manual for use when you return to your office and want to fine tune the skills you have learned at the orientation workshop.

The manual is divided into three sections. The first section is an introduction to VisiCalc and its capabilities. The second section introduces the application that the TAC has developed for using VisiCalc to address West Virginia's Chapter 1 financial recordkeeping and reporting needs. The third section explains how to update, manage and permanently store the results of your recordkeeping and reporting.

Appendices A through E introduce the Apple Computer keyboard and elementary topics such as booting and diskette care. These appendices are designed to familiarize the novice with the basics of microcomputer use.

INTRODUCTION

The microcomputer budget application for West Virginia was developed by the TAC at the request of Ed Moran, Assistant Director, Compensatory Education. The budget program is intended to be used by the Chapter 1 staff of each LEA in West Virginia. The budget program was designed to facilitate the various fiscal reporting requirements of Chapter 1.

The goal of the manual is to provide instructional support in recording monthly expenditures, but additional fiscal capabilities are discussed, including developing new budgets for subsequent year's operations, projecting end of year line item and total balances, and recording budget modifications as a result of those projections. Chapter 1 personnel can use the budget program to keep track of the expenditures for each month, modifications to the budget, and the effects of expenditures and modifications upon the operating budget. Several printing options are available, depending upon the intended audience.

The instructions in this manual are the only VisiCalc* instructions needed to use the budget program. After becoming familiar with these instructions, a thorough reading of the VisiCalc User's Guide is highly recommended, as shortcuts and further uses of your budget program will become evident. Following the instructions in this manual, though, will save you time and effort, while providing the required West Virginia fiscal reporting information for Chapter 1.

*VisiCalc is a trademark of VisiCorp

SECTION I

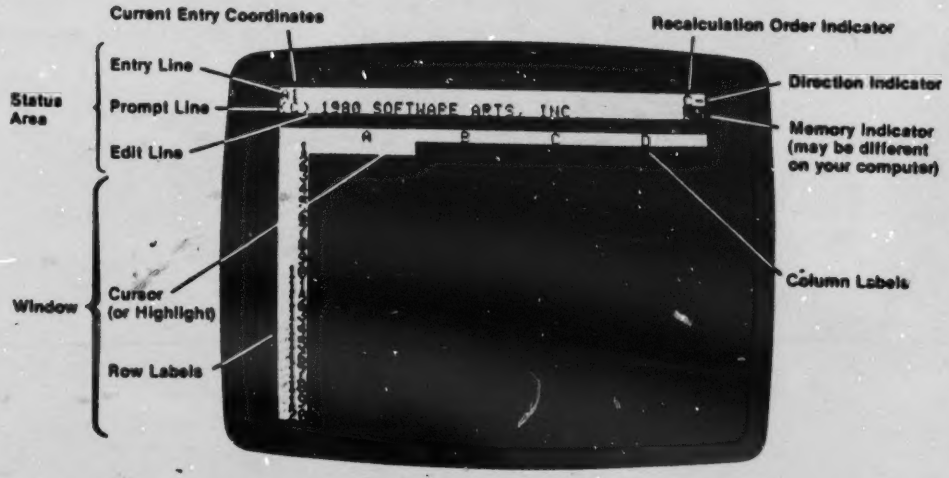
Introduction to VisiCalc

A. BOOTING VISICALC

1. Boot VisiCalc - refer to booting instructions in Appendix D if necessary.

2. VC16 should appear in the upper left corner of the screen while the program is being booted. If VCERR appears VisiCalc has failed to boot. Try again. If it still fails use another method of booting (see your Apple Manual) and/or reinsert VisiCalc diskette and try again. (You can sometimes put voodoo magic on it by opening and closing the door several times.)

3. When the red light on the disk drive goes off, booting is finished. Remove the VisiCalc diskette and return it to its envelope. The screen should look like this:



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B. STEP 1: Loading a File

Insert the data diskette into Drive 1. The data diskette contains several data files, some of which will be used for instructional purposes only. All of these files have names. VisiCalc will tell us what files are on the data diskette so that we can choose which one we want. We load the one we want by using one of the many commands that VisiCalc makes available to us. A command is an instruction to the VisiCalc program to do something specific for us. (For a summary of all VisiCalc commands see the VisiCalc Command Structure Chart in the VisiCalc Manual. All commands are discussed in detail in Part III of the VisiCalc Manual.) The first command we will use will be the command to load a file. This command will copy the file we want from the diskette and put it into RAM and then display the file information on the screen so we can work on it.

The way to tell VisiCalc you want to give it a command is by pressing a slash (/).

Press: /

Look at the prompt line. It has a series of letters that resemble the alphabet. Each letter represents a command. To load a file:

Press: S

Another series of letters and/or symbols appears on the prompt line. We want to load a file so:

Press: L

Now the program is ready for us to look at the list of files on the data diskette. To do this:

Press: ->

The red light will come on the disk drive and the name of the first file will appear on the edit line (the line below the prompt line).

> FOR WORKSHOP PURPOSES ONLY:
>
> This filename happens to be the one we want. But just for practice lets "thumb" through the files. Continue pressing -> until file names are no longer displayed.
>
> Since we have now gone through all the filenames on the diskette we have to reinitiate the command to load a file:
>
> Press: /SL
>
> Press: ->
>
> The file we want is the first one. Its name, EXAMPLE, should now be on the edit line. To load that file:
>
> Press: (R) (Remember (R) is the RETURN key)

If you haven't found the file name, press -> to see what the next one is. When the desired filename appears on the edit line, you can load that file by:

Press: (R)

The disk drive will whir with the red light on while it is loading the file. Notice the number in the upper right corner of the screen is getting smaller. This indicates that space is being taken up in memory (RAM) by this file. The file should pop up on the screen with the cursor positioned at A1.

(For more information on /SL see p. 3-60 of the VisiCalc Manual.)

C. STEP 3: Looking Over a File

This file represents a simplified version of a Chapter 1 budget. The columns are ACCOUNT CODE, ORIG. BUDGET, EXPENDITURE and BALANCE. The rows are the account codes and totals. We can practice moving the cursor as we look over this file. Look at the upper right portion of the screen to see if the Direction Indicator is in the left/right mode (indicated by "-"). If it is in the other mode, up-down, as indicated by "!", press the space bar once to change the direction to left/right.

Press: -> -> -> ->

Notice that the "CURRENT ENTRY COORDINATES" indicator changes to tell you what cell you are in as the cursor moves across the screen. After four presses of the right arrow key, the "CURRENT ENTRY COORDINATES" should read E1. You have reached the right-most side of this file. VisiCalc actually allows more columns:

Press: ->, continuously

until reaching BK, the final column of VisiCalc.

Press: <-, continuously

to return to A1. You will hear a "thud" when you have arrived--you cannot go any further to the left.

Press: space bar

Note the change in the Direction Indicator - it should now be "!"

Press: ->, continuously

until you reach the bottom of the file. To speed this process up a little hold the "REPT" key down while

pressing the arrow keys. Take a minute now to look over the file by changing the direction indicator and using the <- and -> arrows.

SUMMARY

When Direction Indicator is "-"

<- moves the cursor to left

-> moves the cursor to right

When Direction Indicator is "!"

<- moves the cursor up

-> moves the cursor down

If you want to use a short cut to get to a certain coordinate of the file:

Press: (SHIFT). (The > symbol)

Note that the Prompt Line reads "GO TO: COORDINATE." Type in the coordinate you want to go to, such as C1, and:

Press: (R)

The cursor will automatically go to that coordinate.

D. STEP 3: Entering Information

Move the cursor to Coordinate D5.

Press: 1000

Note that 1000 appears on the Edit Line and not in the Coordinate itself. The number will not appear in the Coordinate until you press R. As you press R notice what happens to some of the numbers on the screen.

Press: (R)

The number 1000 has now been entered in Coordinate D5 as 1000.00. Notice three things. First, the budget recalculates itself almost instantaneously. Second, even though the number you typed in is meant to be 1000 dollars you do not have to include the .00 for cents. The VisiCalc program has been told to do that for you. Third, numbers that you normally put a comma in (such as 10,000) should not have commas when entered into the VisiCalc program. If you accidently type a comma in a number and try to enter it, the machine will indicate ERROR. Move the cursor to Coordinate D6 by using the (space bar) and the -> key.

Press: 500 ->

Notice that 500 gets entered when the -> key is pressed with the added advantage that the cursor ends up in the next Coordinate (D7) ready for the next entry.

Summary: Numbers can be entered either by pressing R or -> or <-.

What happens if you make a mistake entering a number? For instance:

Press: 1009 instead of 1000 for Coordinate D7.

If you catch the mistake before you press (R) or -> you can simply backspace over the 9 and type a 0. Where is the backspace key? When using VisiCalc the ("ESC") key is the backspace key:

Press: (ESC) or (R)

and you now have the desired value of 1000.00 in

Coordinate D7.

If you have already gone on to another Coordinate you can move back to the Coordinate with the mistake in it and pretend nothing is there. Simply type in the correct value and enter it as if it were a new entry. VisiCalc erases the old number and puts the new one in its place.

Summary: The easiest way to correct a mistake is to reenter the correct information.

You may notice as you look over the file that different things appear in the status area on the entry line (see p. 3). When the cursor is on a coordinate where there is a column or row heading the name (or partial name) appears on the entry line; when the cursor is on a coordinate where there is a number either the number in the coordinate appears or something that resembles a mathematical formula such as +C5-D5 or @SUM (C5...C18). NEVER enter a dollar amount into a coordinate for which a formula appears on the entry line. If you do you will destroy the accuracy of the program. If you catch your mistake before pressing (R) or an arrow key simply press the backspace key (the (ESC) key) until the entry disappears on the edit line. If you don't catch the mistake in time, clear the screen (/CY) and reload the file.

SECTION II

Applying VisiCalc to West Virginia Chapter 1 Budgets

This section contains three modules. The modules have two purposes. First, they are instructional modules which will help you in understanding and using the budget system. Second, they can be used for refreshing your memory as you put the system in operation when you return to your office.

As you will see each module builds upon the previous one until all the elements of the final system are in place.

A. DEVELOPING A BUDGET

FOR WORKSHOP PURPOSES ONLY

Before we load the next instructional file we must clear the current file from the computer's memory and from the screen. If we don't do this the new file will be placed on top of the old file which may cause some problems. Some information on the old file may show up in the new file and make the new file inaccurate. So, before loading a new file we must use a command to clear the old file.

Press: /

The command options will appear on the prompt line

Press: C

The prompt line will read CLEAR: TYPE Y TO CONFIRM. VisiCalc wants to make sure we haven't pressed the "C" by accident. If any other key but the "Y" (yes) key is pressed the command will be cancelled.

Press: Y

The screen and RAM will be cleared of the file (not VisiCalc) and ready for the loading of a new file.

(For more information on /CY see p. 3-6 of the VisiCalc Manual.)

PURPOSE

- To develop a budget for all account codes
- To allow you to adjust your original budget by reallocating monies to different account codes
- To offer a speedy and accurate means of doing the above

STEP 1: Get file on the screen

-boot VisiCalc diskette

-take out VisiCalc diskette

-insert budget (data) diskette

Press: /SL

Press: -> until "ANNUAL" appears on the edit line

Press: (R)

STEP 2: Look over the file

Use the space bar and right/left arrows to look over the file. You will notice that the file has only one column for dollar amount entries, "ORIGINAL BUDGET". It also only has 3 categories of account codes, the 100, 200, and 800 series.

STEP 3: Enter account code amounts

a. place the cursor in coordinate C6.

b. make sure the direction indicator is in the up/down (!) mode.

c. enter the proposed dollar amount and press -> to go on to the next coordinate.

-if you have no proposed dollar amount go on to a coordinate where you do have one by pressing ->.

STEP 4: Check the subtotal and total

a. note that the subtotal for the account code is automatically calculated with each new or changed entry.

b. move the cursor down to the row entitled "GRAND TOTAL" (Coordinate C50).

-note that the total amount may be more than your first entry amount. This is because the fixed charges have automatically been added to the first entry. This will only occur if the first entry has fixed charges attached to it.

STEP 5: Continue making entries

a. note that in most cases (depending on your LEA's fixed charges calculations) you will not have to make any entries for 800 codes. These accounts will be calculated for you automatically. The method for calculating fixed charges in your LEA will be incorporated in your final file during the workshop.

b. remember, if you have a question about whether or not you should make a dollar amount entry in any coordinate check the entry line first. If it has a formula in it do not make any entry.

STEP 6: Adjust account code amounts

a. if, after entering all account code dollar amounts, the subtotal or grand total is either greater or less than your target amount, then you must adjust separate account code amounts to bring you closer to your target total.

b. remember, if you adjust amounts that have fixed

changes attached to them the "GRAND TOTAL" amount will increase (or decrease) more (or less) than the individual account code change.

HINTS AND SHORTCUTS FOR BUDGET DEVELOPMENT

After reading the VisiCalc manual you may come up with several hints and shortcuts yourself. Here are a few to get you started.

1. You may have noticed that when using the full version of the budget program that after each entry there is a time lag before the cursor appears again, indicating that it is ready for another entry. This is because after each entry the VisiCalc program is recalculating the entire spreadsheet automatically. You may want to make several entries before recalculating the spreadsheet. To do this you need to change the calculation from automatic to manual.

   Press: /GRM

   This command sequence puts the program in a manual calculation mode which means that the machine will not calculate until you tell it to do so. Therefore you may make several entries without having to wait between each entry.

   When you want the program to calculate the new dollar amounts into the spreadsheet:

   Press: (SHIFT) 1 (the "!" symbol)

   Remember to hold down the shift when pressing the 1. To return to calculation

after each entry:

Press: /GRA

Note: If the file is saved while it is in the manual calculation mode, the next time it is loaded it will still be in the manual mode.

(See p. 3-21, VisiCalc Manual.)

2. It is sometimes awkward after having made an entry to scroll down to see what effect it had on the "GRAND TOTAL" and then to go back and forth between the entry and total for more corrections. VisiCalc will help us get rid of this nuisance by giving us split screen capabilities.

Set up the screen so that "GRAND TOTAL" is on the next to the bottom line of the screen. Move the cursor to the line (=====) above the "GRAND TOTAL" row.

Press: /WH

This command creates a Window, Horizontally. You can move the cursor back and forth between the two screens by pressing the semicolon (;) key.

Press: ;

Your have placed the cursor in the top window. Now scroll up to the top of the file. You'll notice that the "GRAND TOTAL" row remains visible at the bottom of the screen. You can now make various account code

dollar amount entires and see how they affect the total without excess cursor movement. (See p. 3-88, VisiClac Manual.)

3. In developing a budget you may simply want to copy in last year's budget as a starting point and make the needed changes in specific account code. There may, however, have been some global-type changes from last year such as a 5% across-the-board pay increase. VisiCalc can handle this situation nicely by acting as a hand-held calculator. When you come to an account code that is a salary simply enter:

   (last year's dollar amt) * 1.05

   VisiCalc will calculate the increase and enter it in the current cursor coordinate. (The asterisk is used by computers as the multiplication sign.)

B. BUDGET TRANSFERS AND AMENDMENTS

> FOR WORKSHOP PURPOSES ONLY
>
> You recall that in the previous section we suggested strongly that before you load a new file you should clear the old file by pressing /CY. Now that we have taught you that rule we're going to break it. We're going to add the next module of the budget to the one we've just done so that all the dollar amounts we've just added will become part of the next file.
>
> Press: /SL -> until you reach "TRANSFER"
>
> Press: (R)

PURPOSE

- To record periodic budget modifications
- To obtain an updated budget

STEP 1: Look over the file

With the cursor direction indicator in the left/right mode (-) look over the headings at the top of the screen. Note the additional columns "BUDGET TRANSFERS", "PROJECT AMENDMENTS", "'83 UPDATE", and "PERCENT BUDGET".

STEP 2. Enter the Budget Transfer

Place the cursor at 1st "TRANSFER" coordinate, D6.

a. -Make sure the cursor direction indicator is "!"
   -Enter amount of modification (if any)
   -Press: ->

b. Continue entering modification amounts in the appropriate budget code row

c. Note that if the modification involves moving amounts from one line to another two entries will have to be made:
   +XXX.XX into the account code to which the money is being moved
   -XXX.XX in the account code from which the money is being removed
   After entering all modifications-
   Press: <- repeatedly
   to check accuracy of information. As part of your check for accuracy you should realize that if dollar amounts are being transferred from one account code to another then the "TOTAL" for budget transfers should

be zero. If any errors are spotted, go to the next step. Otherwise, skip to STEP 4.

STEP 3. Correct entry errors

See instructions on p. 7: "Entering Information."

STEP 4. Save the new information

See instructions on p. 23: "Saving a New File."

STEP 5. Back up the new information

See instructions on p. 24: "Backing Up a File."

(Remember, if you update information on a currently existing monthly file, the backup should be udpated too!)

Follow the same procedures for making budget amendments. In the case of budget amendments the totals will not be zero.

Note that the column "83 UPDATE" now automatically reflects the changes you have made via transfers and amendments. This column is your working annual budget. The next column, "PERCENT BUDGET" tells you what percent each account code amount is of the total budget.

C. RECORDING MONTHLY EXPENDITURES

FOR WORKSHOP PURPOSES ONLY

Again, without clearing the screen

Press: /SL -> until you see MONTHLY

Press: (R)

We have now loaded the monthly file and at the same time "transplanted" information from the two previous files into the monthly file.

PURPOSES

-record monthly expenditures

-send record to SEA

-keep monthly expenditures and running total on file for subsequent month's use

-to keep track of current expenditures, current balance or projected balance

STEP 1: Look over the file

Press: ->, repeatedly

to observe the information stored on this file. After "83 UPDATE" and "PERCENT BUDGET," you will see 12 monthly expenditure columns, "UNLIQUID. ENCUMBER.," "YR-TO-DATE," "PROJECTED BALANCE," and "CURRENT BALANCE."

Press: <-, repeatedly

to return to Coordinate A1.

Press: (space bar)

to change cursor direction.

Press: ->, repeatedly

to observe the rows of the MONTHLY file. Note they are the same as in the previous files.

STEP 2: Enter the month's expenditures

First place cursor in Coordinate C1 and enter the

number of the month of the fiscal year (July =1, June=12).

-Place cursor at first line item of month 1 (Coordinate L6)

a. make sure directional cursor is "!" (press space bar if currently "-")

b. to enter $ expended for first line item:
   -enter numerical amount, such as XXXX.XX
   -press ->, note that $ value was entered into Coordinate L6, and cursor moves to the coordinate for the second line item for month 1 (Coordinate L7)

c. enter $ expended for second line item:
   -enter numerical amount, such as XXXX.XX
   -press ->

d. enter $ expended for third line item:
   -enter numerical amount, such as XXXX
   -press ->

After entering $ expended for last line item, press <-, continously to check accuracy of information. If any errors, go to next step, otherwise, skip to Step 4.

STEP 3: Correct entry errors

See instructions on p. 7: "Entering Information."

STEP 4: Save the new information

See instructions on p. 23: "Saving a New File."

STEP 5: Back up the new information

See instructions on p. 24: "Backing Up a File."

YEAR-TO-DATE: This column provides you with the total amount of money you have spent as of your last entry.

PROJECTED BALANCE: Tells you how much money you will have left at the end of the year if you continue spending at the current rate.

CURRENT BALANCE: Tells you how much money you have left after your last entry.

D. PUTTING IT ALL TOGETHER

For the purposes of this workshop we have been using instructional files which explain the three modules of the budget system. All of these files have been combined to form a fourth file, WVMASTER. WVMASTER also contains a complete listing of all account codes that you will be using when your system is in operation. This file probably contains more account codes than you need. At the end of this workshop the WVMASTER file will be customized to include only those account codes you use. The fixed costs account code will also be customized to meet your local fixed cost structure.

The budget program using VisiCalc allows you to keep track of each month's expenditures both individually and cumulatively. When you have finished entering information for Month 1 (July is Month 1 of the fiscal year) you can save Month 1's information in a file called MONTHLY.1 (or whatever file scheme you want). At the end of Month 2 you simply load MONTHLY.1 and enter the

updates for Month 2 and save the updates along with the information already in the file from Month 1 as a separate file, MONTHLY.2, which will contain information from Month 1 and Month 2. These procedures can be continued throughout the year, providing you with cumulative documentation at monthly intervals.

An additional feature of this application of VisiCalc is budget projections. After each month's entry, the column labeled "PROJECTED BALANCE" lets you know what your year end balance will be for any line item (and total expenditures) if you continue spending at the current rate.

This column is one of several columns which is a "Calculated Column." In other words you don't enter anything in this column; the computer takes information from other parts of the file and uses a formula to calculate a projected balance. The following instructions apply to both the MONTHLY and the WVMASTER files.

Press: (SHIFT).

Prompt Line: GO TO: COORDINATE

Press: Z6 (R)

Look at the top line in the status area. The formula there

+J6-(+Y6/C1*12)

or

$$\text{'83 UPDATE} - \frac{\text{YEAR-TO-DATE EXPENDITURES}}{\text{MONTH \#}} \times 12$$

is the formula for calculating the projected balance. The point of all this is that in order for the projected balance to be correct the number in "C1" (Month #) must

be correct. So remember that when you enter the new month's expenditures put the correct month number in "C1."

The inclusion of "PROJECTED BUDGET" points out another important function of this VisiCalc application apart from the monthly filing and reporting discussed throughout this session. VisiCalc can be used to determine budget alternatives. For instance, if your sixth month projection shows a substantial projected balance in the instruction subtotal the file can be "played with" to develop the most optimal combination(s) of line items to which to shift the projected overflow without disrupting the structure of monthly files. All that need be done is to load the MONTHLY.6 file, manipulate it by moving dollar amounts around in the "BUDGET TRANSFER" columns until the optimal scenario is reached, and save it into a different set of file(s) (say MONTHLY.6T). When the changes are approved then they can be permanently incorporated amendments or transfers whichever is appropriate. This would be, thus, the file that you load when recording the next month's budget.

SECTION III

File Storage and Maintenance

After entering the numerous dollar amounts into your file, this information needs to be stored in some permanent fashion. If it isn't saved--then when you turn the machine off all the information you entered will disappear, unable to be recovered.

This section explains the procedures for storing (saving) files so they can be retrieved quickly. Also some suggestions are offered for how to organize (file maintenance) your files so they won't become confusing.

A. SAVING A NEW FILE

Press: /SS Prompt Line: STORAGE: FILE FOR SAVING

Press: MONTHLY.1 (R)

Actually any name could be used, but we suggest using a numer at end of MONTHLY. to identify the month. (See p. 3-60, VisiCalc Manual.) To verify that file has been saved on diskette:

Press: /CY

to clear RAM and screen (of file, not VisiCalc)

Press: /SL Prompt Line: STORAGE: FILE TO LOAD

Type: MONTHLY.1 (R)

to load that file from diskette.

Look over the entries you recently made to make sure the file was saved correctly.

*This is an alternate way of loading a file.

Note: If you get message "ERROR DISK FULL"
then you need either delete files or initialize a new diskette for storage.

B. INITIALIZING A DISK

Before you can backup a VisiCalc file you must have a blank diskette on which to put the backup copy. Initializing a blank diskette prepares it to receive information from the computer. Initializing tells the diskette what language the computer is going to be communicating in and how to organize the information it will be getting.

To initialize a blank diskette VisiCalc must first be booted. Remove the VisiCalc or any other diskette from the disk drive. Insert the blank diskette and

Press: /SI (R) (Edit line reads: ,S6, D1)

The red light will come on on the disk drive and the drive will whir and click. When the light goes off the disk is initialized and ready to receive VisiCalc files. NOTE: A non-blank diskette may be used but the the initializing process will erase any information already on the diskette. (See p. 3-60, VisiCalc Manual.)

C. BACKING UP A FILE

An inexpensive way to save time and effort is to create a back-up copy of every file. You simply save the file again on another diskette.

1. Remove diskette you just saved the file on (MONTHLY.1)
2. Insert back-up diskette
3. Save file on back-up diskette:

   Press: /SS Prompt Line: STORAGE: FILE FOR SAVING

   Type: MONTHLY.1 (R)

   (file name on back-up doesn't have to be the same name as originally saved--you can choose any name you wish, MONTHLY.1.BACKUP, for instance)
4. Clear screen:

   Press: /CY
5. Load back-up file to verify that the copy has been successfully made:

   Press: /SL Prompt Line: STORAGE: FILE TO LOAD

   Type: MONTHLY.1 (R)
6. If the file is correct, then you are ready to fill out FILE INFORMATION SHEET (Appendix F) to keep track of your various files. NOTE: files can be deleted from diskettes, so no permanent cost is involved in making backup copies.

D. PRINTING A FILE

Note: Printing instructions may vary according to what kind of printer you have.

VisiCalc gives you some flexibility in printing files. To print a file it must be loaded and appear on the screen. From that point you have the option of printing the entire file or any portion of the file.

To print the file, position the cursor at the top left portion of the area you want printed (let's use Coordinate A1

for now).

Press: /PP Prompt Line: PRINT: LOWER RIGHT, "SETUP ,-,&"

You must now determine the area you want printed. Before doing this you should consider the fact that your printer can only print a limited number of characters on one line before either running out of space or returning to the next line. If we ask the printer to print more characters than it has room for on one line then it will print extra characters on the second line. The result will be a printout that does not have the neat columns and rows that appear on the screen. Each column in our file has eleven spaces. On an 80 character printer seven columns will fit. But we need some space for margins so six columns is probably better.

How many rows will the printer print on one page? Again it depends on the margins at the top and bottom of the page. For our purposes here lets say 60. (If using continuous paper, the number of rows is of no conern.)

We have now determined what the maximum area of the file that we can print on one page, six columns and 60 rows. The sixth column is F. Therefore the coordinate of the lower right portion of the file than fit on one sheet of paper is F60.

Press: -F60 (R)

The leading minus sign tells the printer to single space. When you type the minus sign, it will not appear on the screen. If you want doublespacing, do not press the minus key.

Press: (R)

If everything is hooked up correctly, and the printer is turned on, printing should begin.

Note that any portion of the file can be printed as long as it doesn't exceed six columns and 60 rows. The upper left border is defined by the position of the cursor when the print command sequence is initiated. The lower right border is defined by the response to the prompt of "LOWER RIGHT." (See p. 3-40, VisiCalc Manual.)

Appendicies

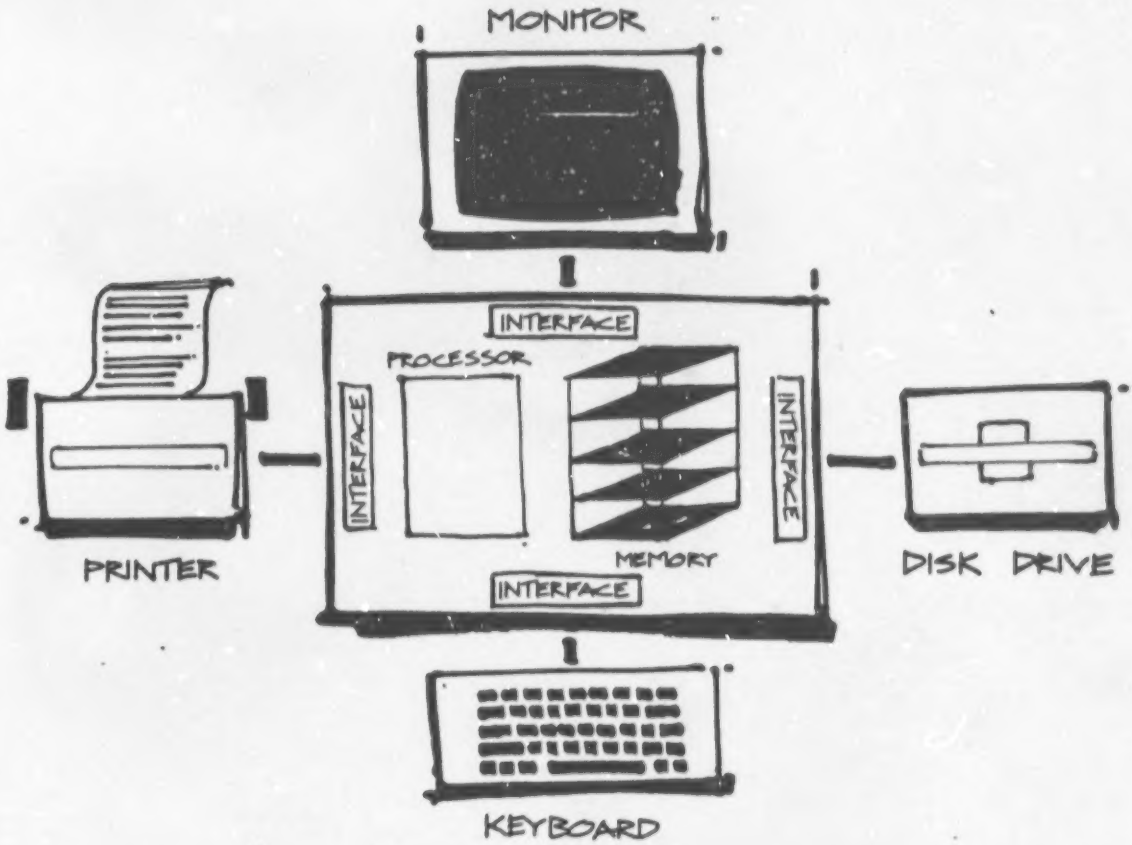
A	Microcomputer Hardware
B	Diskette Information and Rules
C	Memory
D	Booting Instructions
E	Apple Keyboard
F	File Information Sheet

Hardware includes the computer and all the physical devices attached to it.

The most important pieces of hardware in the computer are main memory and the processor.

Next in importance are the circuits that adapt and convey signals between the computer and **peripheral devices.** These circuits are called **interfaces.** Some are built in; others, such as the disk controller card, can be installed in the computer's expansion slots.

Finally, there are the external peripheral devices: **input devices** for information going to the computer and **output devices** for information coming from the computer. Some devices, such as disk drives, are combination **input/output (I/O) devices** used for storage.



From Apple][e Owner's Manual

Appendix B

Diskette Information

Specifications - Holds about 140K of information, 35 single type written pages
- Good for about 40 hours of operation (operating when red light on)

Like a phonograph record and like a cassette tape -

Like a phonograph:

- circular
- grooves
- dirt and particles can cause skips

What happens when a diskette skips?

- data flow is interrupted

Like a cassette:

- information is magnetically encoded
- information is transferred via a read/write head that comes in very close contact with the surface of the diskette
- dirt particles which are caught between head and diskette can cause diskette to be scoured = loss of data
- reading head can bounce off particles and come crashing down on diskette = head crash = loss of data
- magnetic fields will scramble information on diskette

****

Rules for Taking Care of Diskettes

1. Don't touch the exposed surface - hold by label.
2. Don't expose to extreme heat or cold.
3. Don't bend.
4. Don't staple.
5. Don't mutilate.
6. Don't write on labels with ball point pen--only lightly with felt tip pen.
7. Don't smoke, eat, or drink when using diskettes.
8. Do protect from dust by keeping in cover (keep diskette and cover in plastic bag).
9. Do keep at least six inches from magnetic fields (such as TVs and magnetized paper clips).
10. Do insert into disk drive with label side up and label last.
11. Do remove from disk drive only when red light is off.
12. Do remove from disk drive when no longer needed.
13. Do remove from disk drive before turning off computer.

Appendix C

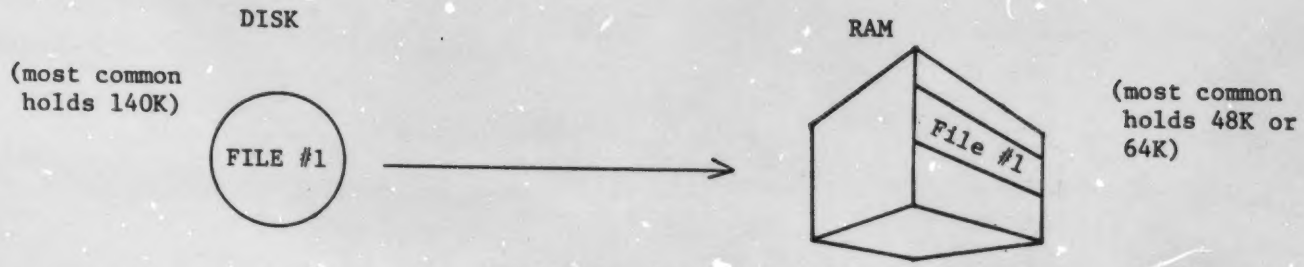
MEMORY

EXTERNAL

INTERNAL

LOAD FILE #1

from Disk into RAM



FILE #1 in both memories

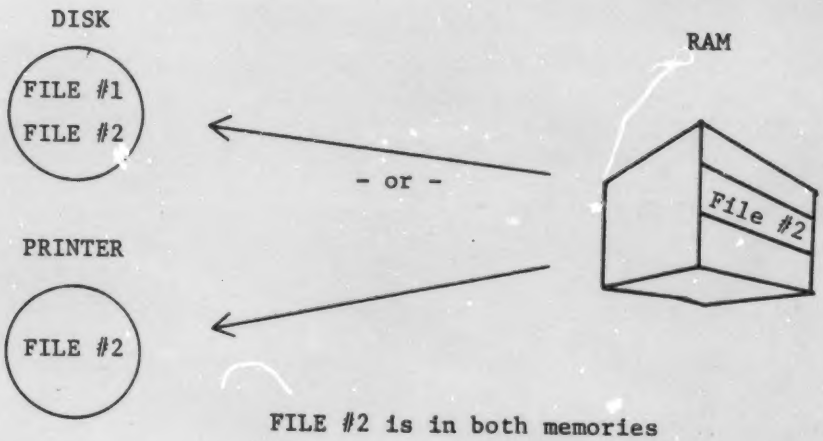
Can remove disk from disk drive

SAVE FILE #2

from RAM to disk

-or-

from RAM to printer



FILE #2 is in both memories

If now turn off computer, RAM will loose FILE #2 - but it will be saved on printer, or on disk with other files.

Appendix D

Booting Instructions

1. If hardware is off

   a. Turn on monitor

   b. Open door to disk drive #1 and gently insert disk, label up, until there is some resistance

   c. Close drive door

   d. Turn the microcomputer switch on

   e. Go to Step 3

2. If hardware is on (leave it on - saves wear and tear)

   Apple 11+

   a. Make sure the "BASIC" prompt ( ]) appears on the screen (if not, remove any disk you have in the drive, turn off the machine and go to Step 1)

   b. Remove any disk from drive #1

   c. Insert desired disk in drive #1 and close door

   d. Press PR#6 R

   e. Go to Step 3

   Apple 11e

   a. Remove disk from drive #1

   b. Insert desired disk in drive #1 and close door

   c. Press 3 keys simultaneously: CONTROL, OPEN APPLE and RESET

3. When red light goes off, all the whirring is over and you have finished booting from the disk into RAM

Appendix E

Apple Keyboard

Apple][e

a. Boot disk "Apple Presents Apple"

b. Follow instructions, and complete at least sections 1, 2, 3, 4, and 5

c. Press 10 when finished

d. When red light goes off, remove disk and place in its cover

Apple II+

a. Boot disk "Introduction to the Keyboard"

b. Complete at least through "Control C", you don't need to play the video game unless you want to

c. When red light goes off, remove disk and place in its cover.

Appendix F

FILE INFORMATION SHEET

FOR DISKETTE: _____

					BACK-UP INFORMATION	
	Date Created	By	File Name	File Description	Save On	File Name
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						